Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A method for preventing or treating HIV infection, said method comprising:

a) screening a plurality of cells to identify stem cells having a beneficial gene; and

b) transplanting said stem cells into a patient, thereby preventing or treating said HIV infection.

2. (Original) The method of claim 1, wherein said beneficial gene is a polymorphism of a gene encoding a protein expressed by immune cells.

3. (Original) The method of claim 1, wherein said beneficial gene is one which reduces the ability of HIV to infect an immune cell.

4. (Original) The method of claim 1, wherein said beneficial gene is one which enhances the ability of an immune cell to neutralize the virus through immune reconstitution.

5. (Original) The method of claim 2, wherein said protein is a ligand of a receptor for HIV entry.

6. (Original) The method of claim 5, wherein said ligand is SDF-1 alpha and said polymorphism is SDF-1 alpha 3'A.

7. (Original) The method of claim 5, wherein said ligand is RANTES and said polymorphism is in the promoter region and increases expression levels.

8. (Original) The method of claim 2, wherein said protein is encoded by a gene in the HLA complex.

9. (Original) The method of claim 8, wherein said protein encoded by a gene in the HLA complex is selected from the group consisting of MHC class I molecule, MHC class II molecule, TNF, and complement.

10. (Original) The method of claim 2, wherein said protein is a receptor or coreceptor for HIV entry.

11. (Original) The method of claim 10, wherein said receptor for HIV entry is CD4.

12. (Original) The method of claim 10, wherein said coreceptor for HIV entry is CCR2.

13. (Original) The method of claim 12, wherein said polymorphism is CCR2-64I.

14. (Original) The method of claim 10, wherein said coreceptor for HIV entry is CCR5.

15. (Original) The method of claim 14, wherein said polymorphism is a 32 basepair deletion in the coding region.

16. (Original) The method of claim 14, wherein said polymorphism is CCR5m303.

17. (Original) The method of claim 14, wherein said polymorphism is in the promoter region of CCR5.

18. (Original) The method of claim 1, wherein said plurality of cells are obtained from the group consisting of embryos, marrow, peripheral blood, placental blood, umbilical cord blood, and adipose tissue.

19. (Original) The method of claim 1, further comprising in vitro or in vivo expansion of said stem cells.

20. (Original) The method of claim 1, wherein said method further comprises identification of the HLA genotype or phenotype of said stem cells.

21. (Original) The method of claim 20, wherein said identification of the HLA genotype is via a high-throughput method using allele-specific primers and HLA locus-specific capture oligonucleotides immobilized on a solid phase.

22. (Original) The method of claim 1, wherein said screening comprises identification of stem cells expressing the protein product of said beneficial gene.

23 . (Original) The method of claim 22, wherein said protein product is detected or identified using an immunological assay.

24. (Original) The method of claim 1, wherein said screening comprises identification of stem cells with said beneficial gene.

25. (Original) The method of claim 24, wherein said beneficial gene is detected using a hybridization-based assay, a sequencing assay, or a functional assay.

26. (Original) The method of claim 1, further comprising treatment of said stem cells to express a non-native HLA protein or to inhibit expression of the native HLA protein.